Gigabit Switch

PSGS-2112C: 12-Port GbE L2 Managed PoE Switch with 2 SFP Dual Media

Key Features

- **Standard compliance**
  - ---IEEE 802.3af PoE Standard
  - ---IEEE 802.3x Flow Control capability
  - ---IEEE 802.1q VLAN
  - ---IEEE 802.1p
- **RoHS Compliance**
- **PoE Specification**
  - ---Supports IEEE 802.3af compliant
  - ---Supports Power over Ethernet (PSE) on each Gigabit UTP port
  - ---Full power support for per POE port
  - ---Auto detect powered device and consumption levels
  - ---Supports per port power consumption monitoring
  - ---Smart feature for PD on/off, PD detection, power level, PD status and power feeding priority
  - ---Circuit protection to prevent power interference between ports
  - ---Supports per port PoE State setting
  - ---Supports per port power priority setting
  - ---LED indicators for POE ready and POE activity
- **Performance**

  Switching capacity:
  - ---12 Gigabit Ethernet ports with non-blocking wise speed performance
  - ---8 K MAC addresses
  - ---208KB on-chip frame buffer
  - ---Supports Jumbo frame support, up to 9K
  - ---Broadcast/Multicast Storm Suppression
  - ---Port Mirroring

  VLAN
  - ---Port-base VLAN
  - ---IEEE802.1q tag-base VLAN, up to 256 active VLANs
  - ---Q-in-Q is an efficient method for enabling Subscriber Aggregation

  VSM(Virtual Stacking Management)
  - ---Support 16 devices stacking
  - ---Multiple switches can be managed via one IP address, just like software stacking

Benefits

- **PoE Save Your Power Infrastructure Cost**

  12-PoE ports allow power to be supplied to end devices, such as Wireless Access Points or VoIP Phones, directly through the existing LAN cables. By supplying the power mid-span, you can centralize power distribution and backup without the need to increase infrastructure.
- **2 Dual Media for Flexible Fiber Connection**

  11, 12 dual media port are provided for flexible fiber connection. You can select to install optional transceiver modules in these slots for short, medium or long distance fiber backbone attachment. Use of the SFP will disable their corresponding built-in 10/100/1000Base-T connections.
- **QoS support layer 4 classification**

  The switch supports not only Layer 2 802.1p Priority Queue control, but also supports programmable higher layer classification and prioritization to enable enhanced Quality of Service (Qos) support for real time applications base on information taken from Layer 2 to Layer 4, such as VoIP.
- **Q-in-Q VLAN for performance & security**

  The VLAN feature in the switch offers the benefits of both security and performance. VLAN is used to isolate traffic between different users and thus provides better security. Limiting the broadcast traffic to within the same VLAN broadcast domain also enhances performance. VLAN support enabling advanced techniques such as "802.1Q-in-1Q" to be deployed.
- **802.3ad Port Trunk for Bandwidth Aggregation**

  The Gigabit ports can be combined together to create a multi-link load-sharing trunk. Up to 6 Gigabit ports can be set up per trunk for bandwidth up to 12Gbps, all traffic is aggregated based on MAC addresses, thus balancing the traffic load. The switch supports up to 6 trunking groups. Port trunks are useful for switch-to-switch cascading, providing very high full-duplex speeds.
- **802.1x Access Control Improve Network Security**

  802.1x features enable user authentication for each network access attempt. Port security features allow you to limit the number of MAC addresses per port in order to control the number of stations for each port. Static MAC addresses can be defined for each port to ensure only registered machines are allowed to access. By enabling both of these features, you can establish an access mechanism based on user and machine identities, as well as control the number of access stations.
- **802.1D Compatible & 802.1w Rapid Spanning Tree**

  For mission critical environments with multiple switches supporting STP, you can configure the switches with a redundant backup bridge path, so transmission and reception of packets can be guaranteed in event of any fail-over switch on the network.
- **Broadcast/Multicast Storm Control**

  To limit too many broadcast/multicast flooding in the network, broadcast/multicast storm control is used to restrict excess traffic. Threshold values are available to control the rate limit for each port. Packets are discarded if the count exceeds the configured upper threshold.

Gigabit Switch

---Low cost and easily to establish network environment, not extra hardware require.
---Not center on the physical location of wiring closets

Qos
---Supports Layer 4 TCP/UDP Port and ToS Classification
---Supports 802.1p QoS with two level priority queue
---Supports priority in a Q-in-Q tag

Bandwidth Control
---Supports bandwidth rating per port ingress and egress rate limit 1000Mbps with 1Mbps

- **Protocol**

LACP
---Port trunking with 6 trunking group
---up to 6 ports for each group

GVRP/GARP
---802.1q with GVRP/ GARP

Multicasting
---Supports IGMP snooping including active and passive mode

STP/RSTP
---802.1d/1w

- **Network Security**

---802.1x access control
---Management Access Policy Control (L2 ACL)

- **Snmpv1,v2c Network Management**
- **RFC 1213 MIB (MIB-II)**

---Interface MIB
---Address Translation MIB
---IP MIB
---ICMP MIB
---TCP MIB
---UDP MIB
---SNMP MIB

- **RFC 1757 RMON MIB**

---Statistics Group 1
---History Group 2
---Alarm Group 3
---Event Group 9

- **RFC 1493 Bridge MIB**
- **RFC 1643 Ethernet MIB**
- **Enterprise MIB**

Overview

PSGS-2112C supports 12 10/100/1000 Mbps Auto-negotiation, Auto-MDIX Ethernet ports and Power over Ethernet to IEEE 802.3af compliant devices. It's fully compliant with the standards of IEEE 802.3 /u/x/z/ab/af. It is equipped with 12 Giga TP ports and 2 of which are dual media ports that accommodate optional 10/100/1000 Base-T or SFP modules. In addition, the switch implements the QoS (Quality of Service), Mac Filtering Policy, Port Mirror, VLAN and full L2 protocol. The overall network management is enhanced and the network efficiency is also improved to accommodate high bandwidth applications with security.

Technical Specifications

- **LED Description**

	LED	Color	Function
Global	POWER	Green	-Lit when +5V power is coming up
Global	CPU	Green	-Blinks when CPU is activity
Port 1-12	LINK/ACT	Green	-Lit when connection with remote device is good -Blinks when any traffic is present
Port 1-12	10/100/ 1000Mbps	Green /Amber	-Lit Green when TP link on 1000Mbps speed -Lit Amber when TP link on 100Mbps speed -Off when 10Mbps or no link occur
Port 11,12			-SFP Green Lit when SFP connection with remote device is good -Blinks when any traffic is present

- **Diagnostic LED:**

System LED :	Power
10/100/1000M TP Port Per Port LED:	Link/Act, 1000/100Mbps
Gigabit SFP Module LED:	SFP

- **Network Interface**

Configuration	Connector	Port
10/100Mbps TP Jack (RJ-45)	TP(RJ-45)	1 to 12
1000Mbps SFP Fiber Module Dual Media Auto Detection	SFP	11, 12

- **Cable and Maximum Length:**

TP	Cat. 5 UTP cable, up to 100m
1000Base-SX SC M-M	Up to 220/275/500/550m, which depends on Multi-Mode Fiber type
1000Base-LX SC S-M	Single-Mode Fiber, up to 10/30/50Km
1000Base-LX WDM SC S-M	Single-Mode Single Fiber, Bidi 20Km

- **Hardware Spec.**

Feature	Detailed Description
Voltage	100~240 V
Frequency	50~60 Hz
Power Requirement	200W or 150W
Total Power for PoE	185W or 135W
Ambient Temperature	0 to 40℃
Humidity	5% to 90%
Dimensions	44(H) x 442(W) x 209(D) mm
Weight	3kg
Safety	Comply with FCC Part 15 Class A & CE Mark Approval

Packing Information

Carton Dimensions (mm)	pcs/Carton	N.W (KG)	G.W (KG)
530x512x345	5	20	21

Ordering Information

PSGS-2112CF	12-Port GbE L2 Managed PoE Switch with 2 SFP Dual Media (185W)
PSGS-2112C	12-Port GbE L2 Managed PoE Switch with 2 SFP Dual Media (135W)

Optional SFP Module	
SFP.LC	1000Base-SX GE SFP Fiber Module, LC Multi-Mode 850nm
SFP.LC.M2	1000Base-SX GE SFP Fiber Module, LC Multi-Mode 1310nm 2km

Note:
We recommend the SFP transceiver from the following vendors:
1. Ruby Tech Corporation
2. Agilient Technologies
3. AVAGO Technologies
4. Finisar Corporation

Ruby Tech Corp.
3F, No.1, Lane 50, Nan Kang Road, Sec.3, Taipei, Taiwan
TEL:886-2-2785-3961 FAX:886-2-2786-3012
http://**www.rubytech.com.tw**
E-mail : rubytech@mail.rubytech.com.tw

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